

Near Infrared LIDAR for Hazard Sensing and Characterization, Phase I

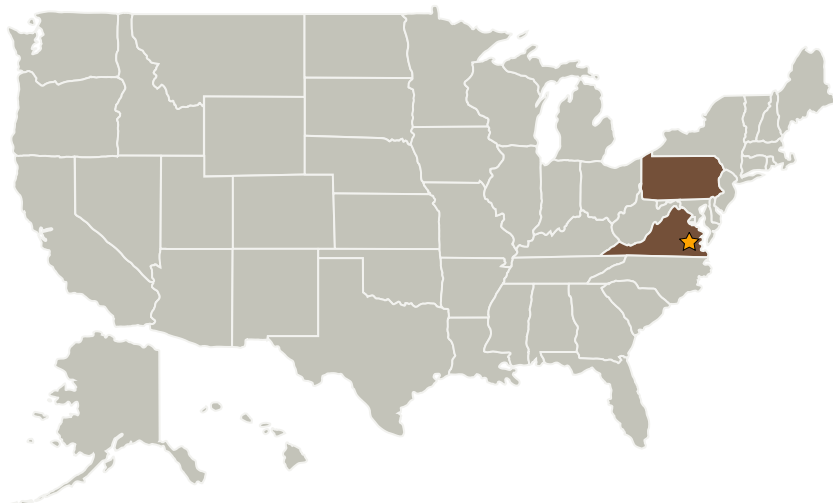
Completed Technology Project (2007 - 2007)



Project Introduction

RL Associates, Inc. proposes to conduct research leading to the development of a shortwave infrared (SWIR) range-gated LIDAR system for use in detecting external obscuration and hazards. Working in conjunction with a database of optical properties for known obscuration, the system will be capable of identifying the type and severity of the hazard. While several different LIDAR ranging techniques are currently employed for airborne detection applications, the RL Associates Inc. hazard detection and mitigation system is based upon our patented range-gated technique used in our FireLidar system. This technique allows not only detection of obscuration, but can also be used to image through obscuration and thus mitigate the hazard. RL Associates Inc. is currently leading the industry in shortwave infrared (1.5 μm) active imaging systems and plans to use that technology in developing the SWIR LIDAR Hazard Detection System. This system will be compact and lightweight and will operate around 1.5 μm , which is safe to the human eye.

Primary U.S. Work Locations and Key Partners



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Organizational Responsibility

Responsible Mission Directorate:

Space Technology Mission Directorate (STMD)

Lead Center / Facility:

Langley Research Center (LaRC)

Responsible Program:

Small Business Innovation Research/Small Business Tech Transfer

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Organizations Performing Work	Role	Type	Location
★ Langley Research Center(LaRC)	Lead Organization	NASA Center	Hampton, Virginia
RL Associates, Inc.	Supporting Organization	Industry	Chester, Pennsylvania

Primary U.S. Work Locations	
Pennsylvania	Virginia

Project Management

Program Director:

Jason L Kessler

Program Manager:

Carlos Torrez

Technology Areas

Primary:

- TX08 Sensors and Instruments
 - └ TX08.1 Remote Sensing Instruments/Sensors
 - └ TX08.1.5 Lasers